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The Keck 'virtual' guide star, showing the orange laser beam emerging from the dome of the Keck II Telescope atop 14,000 foot Mauna Kea volcano in Hawaii.

# Guide star helps Keck see the light

By Anne M. Stark  
NEWSLINE STAFF WRITER

Lab scientists in collaboration with the W.M. Keck Observatory have created a "virtual" guide star over Hawaii. The virtual guide star will be used with adaptive optics on the Keck II telescope to greatly increase the resolution of fine details of astronomical objects.

Installed in 1999, the Keck adaptive optics system has enabled astronomers to minimize the blurring effects of the Earth's atmosphere, pro-

ducing images with unprecedented detail and resolution. The adaptive optics system uses light from a relatively bright star to measure the atmospheric distortions and to correct for them, but only about 1 percent of the sky contains stars sufficiently bright to be of use. The new virtual guide star will enable Keck astronomers to study nearly the entire sky with the high resolution of adaptive optics.

The virtual guide star, which achieved "first

See GUIDESTAR, page 5

## Process to select Lab's next director under way; employee input requested

The official process to select a new Laboratory director is under way and employee input is desired, says John McTague, UC vice president for Lab Management.

McTague briefed LLNL senior management earlier this week on the anticipated schedule and how the process will work. "It is important that Lab employees take an active role in this process," he said. "We definitely want suggestions and input as to the type of person who would make a good director."

The process to appoint a new director is a formal UC procedure — one that has been used to appoint Laboratory directors since 1972. The job description and advertisement for the position is already appearing in a number of national magazines, and a Feb. 15 deadline for submission of applications and nominations has been set.

In addition, a screening committee, chaired by John Birely, an independent consultant who formerly had the positions of assistant to the secretary of defense for atomic energy and associate director for nuclear weapons at Los Alamos National Laboratory, is now in place.

"We expect the screening committee to produce a short list of candidates by early March," said McTague. This list will then be given to a more formal UC advisory committee, made up of UC Regents, research scientists and administrators. "We hope the advisory committee will begin to interview candidates in the late March/early April timeframe," said McTague. "If all goes well, we should have recommendations for the UC

See SELECTION, page 8

## Labs looking into control of access along East Avenue

Lawrence Livermore and Sandia national laboratories are exploring the feasibility of controlling access to East Avenue between Vasco and Greenville roads. This is a result of the heightened security across the nation following the events of Sept. 11.

LLNL and Sandia's California site are working with the DOE/NNSA to explore limiting access to the mile-long stretch of East Avenue between the two labs. The labs, working with Alameda County and the City of Livermore, are looking into the impact of controlling access and any inconvenience to nearby residents.

Controlling access along East Avenue would serve as a deterrent to potential terrorist threats; enhance the safety of the people who work at and visit the two laboratories, enhance security for surrounding neighborhoods, allow open access between Sandia and LLNL, improve vehicle and pedestrian safety around and between the two laboratories, as well as provide for common service areas.

## Abraham learns of Lab's subcrit work at NTS

MERCURY, Nev. — Secretary of Energy Spencer Abraham visited the Nevada Test Site on Monday to learn about the Nevada Center for Combating Terrorism. Livermore is a partner in the center, and the Lab's Big Explosive Experimental Facility (BEEF) is considered part of the center complex. Afterward, the secretary toured Livermore facilities at U1a, the underground subcritical experiment laboratory, located nearly 1,000 feet beneath the surface at the NTS.

"Down hole," Livermore's Subcritical Test Director Walter Dekin briefed the secretary on the purpose of the "subcrit" program, including the concept and development of the underground laboratory, the successes of our experiments to date, and our anticipated future schedule.

Abraham was particularly interested in the

Laboratory's development of a containment vessel, about the size of an oil drum, for small subcritical experiments.

The vessel has allowed long-term use of diagnostic set-ups and experiment chambers, saving millions of dollars in the process. The eight containment-vessel experiments conducted so far by Livermore have provided a fast and cost-effective method of obtaining data to assess the aging of nuclear weapons components. Dekin explained that the results are used to improve the models of plutonium behavior in ASCI computer simulations. These simulations are used to evaluate the long-term performance of the weapons in the enduring stockpile, an important goal of the science-based Stockpile Stewardship Program.



Remembering  
RUTH  
— Page 3



UC approves  
project plan  
— Page 5



Report shows  
'owls' well  
— Page 7





## LAB COMMUNITY NEWS

### Weekly Calendar

Technical Meeting Calendar, page 4

Saturday  
**12**

There will be a **scheduled power outage** in Bldg. 551E and 551W from 7 a.m. to 3:30 p.m. Contact: Mark Cardoza, 3-0490.

Wednesday  
**16**

The Laboratory will hold-sits annual celebration honoring **Martin Luther King** at 1:15 p.m. in the Bldg. 123 auditorium. Art Jackson, a performance improvement educator and consultant, will present "Hanging 'Round the Barrel: Leading a Life of Significance." Winners of the scholarship essay contest, sponsored by the Affirmative Action & Diversity Program, will read their winning entries. Music will be provided by the Castleer Vocal Ensemble.

Thursday  
**17**

An **Al-Anon group** is starting onsite. The group will meet on Thursdays from noon-1 p.m. in Trailer 3520, room 1174 (Sycamore Room). Contact: Jane P., 4-4689, or Mike F., 3-4827.

Saturday  
**19**

**Melody of China**, an ensemble of professional musicians presenting Chinese classical, folk, contemporary music, will perform at 8 p.m. in Livermore at First Presbyterian Church, 4th and L streets. Tickets are \$12 for adults, \$9 for seniors/students, and free for youth through high school. Contact: Del Valle Fine Arts, 447-2752 or visit <http://www.delvallefinearts.org>.



A representative from **Fidelity Investments** will be on-site to meet with employees Jan. 23-24. Fidelity Investments are available to UC's 403(b) participants in addition to the UC-managed investment funds. To make an appointment, call Fidelity 1-800-642-7131. Be sure to specify you are an LLNL employee.

The **Eldercare Support Group** sponsored by Health Services will have a networking meeting at noon on Tuesday, Jan. 29, in the press room Trailer 6575 (between Visitor Centers and Credit Union). Family members of Lab employees and contract workers are welcome to attend. Badges are not required. Reservations are not required. Contact: Marnette Yeager 2-1217.

The Benefits Office is offering a workshop on the fundamental principals of investing titled, "**Basic Investment Planning and Savings**," on Tuesday, Jan. 22, at 8:30 a.m.-noon or 1-4:30 p.m. at the Training Center. The cost of this workshop is \$45. Pre-registration is required. You can register by visiting the Benefits Office Website at [www.llnl.gov/jobs/benefits](http://www.llnl.gov/jobs/benefits) and click on Seminars/Workshops or call the Training Center at 4-3849.

## Retirees travel extensively in 2001

By Bob Becker

LLNL RETIREE

The suggestion that retirees send me copies of their Christmas letters proved to be quite productive; therefore, much of the information in this month's column came from these letters. By the way, if you send me a note or e-mail, please include the date you retired and your department and/or program where you worked; send these to Bob Becker, 1690 Frederick Michael Way, Livermore, 925-447-3867, or e-mail [rcbecker@aol.com](mailto:rcbecker@aol.com).

**Barbara Costello Anderson** (Dosimetry)

had an eventful year, including cruising the Sea of Cortez, a visit to the Copper Canyon, trips to Sweden and Walt Disney World, and then the more routine things, like security escorting at the Lab, being a custodian at Holy Cross Lutheran School and a coordinator at the Alameda County Amateur Gardening Department. She also celebrated her 70th birthday at a big party that her children arranged (I hope she doesn't mind me saying this).

**Leonard Allen** (Electronics) now lives in Railroad Flat, about 60 miles east of Stockton, and would like to hear from his friends (209-293-4013, [eallendeelen@volcano.net](mailto:eallendeelen@volcano.net)). The Allens had a busy year. In June, they took a trip to eastern Canada, followed by a trip in their camper to Markleyville, a trip to Africa with hunting on several game farms, a visit to the French Riviera and a camper trip to Joshua National Park. I wonder if Lab retirees should make the book of records for the amount of travel they accomplish.

**Wilma McGurn** (Director's Office), took a trip to Cuba, which was sponsored by a local college.

**Lorene Stack Olsen** (Human Resources) has taken up acupuncture and Chi Gong to ward off some of her pains, and it seems that the results have been quite good. Lorene attended an all-school reunion at Multnomah, Ore., and Alpha Chi Omega, class of '47, gathered for a grand event on John Day land.

**Gordon Repp** (Physics), whom I may have mentioned before, was in a very long-standing car pool from Danville to the Lab that was noteworthy for its many years of existence, as well as special rules that defined how many drops of rain on the windshield it took to establish their special rules that governed rainy days. Gordon finally retired as newsletter chairman for the Northern California Association of Phi Beta Kappa. The events of Sept. 11 did not delay the Repp's trip to Lisbon, Portugal, and Spain.

**Bill Mumper** (B Division, Site 300), celebrated his 75th birthday and his wife Marion indicates that he is just as ornery as ever. Bill still spends a day or two a week at the Lab and still gets together for coffee on Tuesdays with some of his friends from the Lab. The big event of the year was their 50th wedding anniversary. They also took a paddlewheeler for a seven-day cruise on the Columbia River. Billiards on Tuesday night and pinochle on Thursday are still part of Bill's routine.

### RETIREMENT

#### Phil Govenor

Phil Govenor of Facilities & Maintenance Management Division is retiring after 39 years at the Lab.

A retirement party is scheduled for Friday, Jan. 25 at the Clubhouse at Las Positas from 4-7 p.m. Cost is \$20 and includes appetizers, beverage and gift. RSVP by Jan. 18 to Angel Harmon, 3-1274, or Brenda Terry, 3-0729.

**Edgar Peck** (Chemistry and Defense Systems), is serving as the interim pastor at the First Christian Church in Corning. Edgar and Janet took a mini vacation to Kansas City.

**Paul and Lu Phelps** (Electronics), live near Inverness with a beautiful view of Tomales Bay. Their activities include a Chinese healing group, a spirituality group, a mystery book group, a road board, a coastal alliance board and a garden club board, etc. In

their spare time, they have finished their wood-fired bread oven and plan to explore the nuances of bread making (focaccia, pizza, etc). Their entertaining will be centered around their bread oven and their wine cellar. Paul has his extra class radio license, teaches and has given the exams for new licensees and is the leader of the West Marin Radio Amateur Group. They still ride their bikes and took a trip to Yosemite. It's not clear from their letter what they do in their spare time.

I received a long holiday letter from the **Lims** (Chemistry and Business Services). In addition to their many family activities, the Lims took trips to Hawaii, Lake Tahoe, Angel's Camp, and Anna took a trip Cancun and Florida.

Get out your calendar to list some of the activities of the Retirees networking group:

- Dinner dance on Jan. 18; Springtown; 931 Larkspur Drive; cost: \$23; reservations by Jan. 11. Call Dick Hatfield, 426-9707.

- Travel slide shows; fourth Tuesdays, 2 p.m.; Livermore Library. Upcoming programs include:

- Jan. 22: Eastern Central Asia: Pakistan, Kazakhstan, Kyrgyzstan and Uzbekistan — the Chins.

- Feb. 26: England, Scotland and Wales — Richard Hasbrouck.

- March 26: New Zealand — Gil Cruz.

- Luncheons will continue to be held at Cattleman's. Call Pauline Floyd, 449-8594.

Linda Lucchetti, **Visitors Center coordinator**, is anxious to recruit retirees to act as docents. If you are interested, contact her at 925-422-5815.

The LLNL **Industrial and Commercialization Office** (IPAC) is gathering information on start-up companies based on Lab technology to publicize during the Lab's 50th anniversary. Specifically, they need the assistance of retirees to track down start-up companies that have been formed by former Lab employees or others based on LLNL technology, inventions, software, or Lab state-of-the-art know-how. If you know of any such companies, contact Richard Ragaini at 925-423-2307 or [ragaini@llnl.gov](mailto:ragaini@llnl.gov).

In a recent columns, I fouled up and mentioned Roger Arch instead of **Roger McCardle**. Roger Arch is Roger McCardle's AOL name. He requested that I correct this error.

## Newsline

*Newsline* is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

#### Contacts:

Managing editor: Lynda Seaver, 3-3103

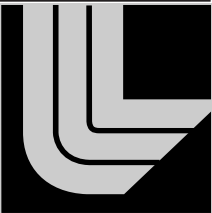
Contributing writers: Sheri Byrd, 2-2379; Don Johnston, 3-4902; Elizabeth Rajs, 4-5806; David Schwoegler, 2-6900; Anne Stark, 2-9799; Steve Wampler, 3-3107; Gordon Yano, 3-3117. For an extended list of Lab beats and contacts, see <http://www.llnl.gov/llnl/06news/NewsMedia/contact.html>

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1952 – 2002  
MAKING HISTORY, MAKING A DIFFERENCE



Pushing the frontiers of science, technology

The second in an ongoing feature highlighting various aspects of the Lab’s 50-year history.

RUTH, the Laboratory’s first nuclear test, explored a new design for fission devices that offered hope for smaller, more efficient bombs and provided information about certain thermonuclear reactions. The experiment exemplified Livermore’s commitment to be a “new ideas” laboratory. The device was mounted on a 300-ft steel tower, and RUTH was fired on March 31, 1953—just six months after Livermore opened. The test was a fizzle. But the Laboratory pressed ahead in its quest for more compact weapon designs that were efficient in their use of nuclear materials. The research led to the Laboratory’s first weapon-development assignments, including the W48 155-mm howitzer atomic projectile and other tactical nuclear weapon systems.

Researchers at Livermore focused their thermonuclear work on the design of H-bombs that were smaller in size and yield than those of Los Alamos. The first thermonuclear test in 1954, KOON, was also a fizzle. Continuing efforts and future successes led to Livermore’s development of much smaller diameter “H-bomb” missile warheads later in the 1950s, which made the Polaris submarine program possible.

a ‘new ideas’  
LABORATORY  
1953



The remains of the test tower after the first device fielded by the Laboratory was detonated in 1953. The test failed.

Around the world

- Death of Soviet Union Secretary General Josef Stalin.
- Korean armistice signed.
- USSR “boosted” H-bomb tested
- Death of Edwin Powell Hubble.

Around the nation

- Eisenhower’s “Atoms for Peace” speech.
- Sir Winston Churchill received the Nobel Prize in Literature.

- Experiments with mice link cancer to tobacco tar.
- 20 million households have television sets, up from under 1 million in 1949.
- Commercial advertising is wide-spread.

Around the Lab

- Herbert F. York was the Lab’s director.
- The Lab employed a total of 698 people, with a budget of \$3.5 million.

in other

NEWS

Significant events  
around the world,  
Lab and elsewhere.



Send us  
your story

Do you have an interesting story about “life at the Lab?”

The 50th Anniversary Committee is gathering human-interest stories from employees, retirees and alums for *Fifty Years of Stories: Life at the*

*Laboratory*, a publication that will celebrate the people and experiences that have shaped Lab life.

Stories will either be included in the publication or posted on the 50th Anniversary Website.

Or, if you know an employee, retiree, or former employee who has an interesting story, we’d like to hear from them, too.

When submitting your story, please include your name, job title, phone number and email address. Stories will be edited for length, grammar and punctuation, and fact-checked as necessary.

Interviewers will be available if you are unable to write your story.

**Deadline: Feb. 15.** Send your stories to Laurie Powers, L-664, powers12@llnl.gov. You may also submit stories on the Web at [http://www.llnl.gov/50th\\_anniv/story.htm](http://www.llnl.gov/50th_anniv/story.htm). **Questions?** Call Laurie, (925) 423-9868

50 influential people to work at Lab

Your name (optional): \_\_\_\_\_ Your ext. \_\_\_\_\_

Who:

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Lawrence Livermore  
National Laboratory

Making History  
Making a Difference

1952-2002





## NEWS YOU CAN USE

### BRIEFLY

#### **Military supplement approved**

There is good news for Lab employees in the Reserves and National Guard. Last month, the UC president approved a supplement to military pay for UC employees who are serving on active military duty in the aftermath of the Sept. 11 terrorist actions, and DOE has approved its extension to Lab employees. The approved supplement will permit the Lab to make up the difference, if any, between Lab pay and military compensation (base pay plus allowances) retroactive to the last day on pay status, and to continue the University's contribution to health insurance premiums for a period of up to 180 calendar days. The supplement is in addition to the 30 calendar days' pay provided under Laboratory policy, [http://www-r.llnl.gov/human\\_resources/RED/pppm/G\\_Benefits.htm#G\\_5\\_3](http://www-r.llnl.gov/human_resources/RED/pppm/G_Benefits.htm#G_5_3).

To receive the supplement, eligible employees must complete a Supplement to Military Pay Worksheet, which is available at [http://www.ucop.edu/humres/mil\\_pay\\_wrk-sht.pdf](http://www.ucop.edu/humres/mil_pay_wrk-sht.pdf). UC's Implementation Guidelines, which will need to be adapted to Lab Payroll processes, contain the instructions for completing the worksheet in Part VIII - Procedures, available on page 5 of the document available at [http://www.ucop.edu/humres/mil\\_pay\\_guide.pdf](http://www.ucop.edu/humres/mil_pay_guide.pdf). For now, completed

worksheets may be faxed to Virginia George in Human Resources at 3-5665. Comments and questions may be directed to her at 2-6597 or [george13@llnl.gov](mailto:george13@llnl.gov).

#### **Changes in Aetna health care coverage**

Aetna has informed the Laboratory that John Muir Medical Center, Mount Diablo Medical Center and John Muir/Mount Diablo Health Network have rescinded their termination of the Aetna U.S. Healthcare network. Aetna Network Management successfully renegotiated the John Muir Medical Center, Mount Diablo Medical Center and John Muir/Mount Diablo Health Network contract. The system signed a contract for all products, including the facility and all affiliated physicians.

As a result, there will be no interruption of member care and/or the participation status of the facility. Aetna will send a notice to affected members within the next two weeks. Additional details are available at the following Benefits Office Website on the Frequently Asked Questions link: [http://www.llnl.gov/llnl/02employment/benefits/tri\\_valley\\_health.htm](http://www.llnl.gov/llnl/02employment/benefits/tri_valley_health.htm).

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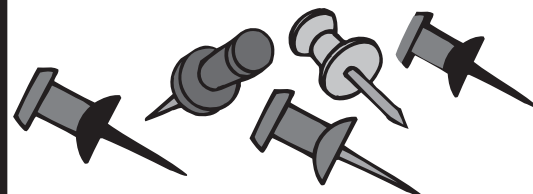
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For further information or a brief presentation in your area, call Ron Young, team leader for Shop Stock, 4-4100 or pager 5-5276.

## Technical Meeting Calendar

Friday  
**11**

#### **MATERIALS SCIENCE & TECHNOLOGY**

"A Model for Instability Growth in Accelerated Solid Metals," by Jeff Colvin. 3:30 p.m.,

Bldg. 235, room 1090 (uncleared area). Coffee and cookies will be served at 3:20 p.m. Foreign nationals may attend if an appropriate security plan is on file. Thomas E. Felter, 2-8012.

#### **CHEMISTRY & MATERIALS SCIENCE**

"Applications of TOF-SIMS in the Hard Disk Drive Industry," by Filippo Radicati, Maxtor Corp. 11 a.m., Bldg. 235, Gold Room (uncleared area). Contacts: Art Nelson, 2-6488, or Roberta Marino, 3-7865.

Monday  
**14**

#### **CENTER FOR APPLIED SCIENTIFIC COMPUTING**

"Terascale Simulation of Trade Cumulus Convection," by David Stevens. 10 a.m.,

Bldg. 451, room 1025 (uncleared area). Contacts: David Stevens, 2-7649, or Leslie Bills, 3-8927.

#### **DEPARTMENT OF APPLIED SCIENCE**

"A Framework for Understanding Vulnerabilities in Firewalls Using a Dataflow Model of Firewall Internals," by Eugene Shultz, LBL. 4 p.m., Bldg. 661 (Hertz Hall), room 7 (open area). Refreshments served at 3:30 p.m. for a "meet the speaker" session before seminar

and at 5 p.m. after the seminar. Contact: Estelle Miller, 2-9787.

#### **CHEMISTRY & MATERIALS SCIENCE**

"Large Scale Statistics for Computational Verification of Grain Growth Simulations with Experiments," by Melik Demirel, LANL. 10:30 a.m., Bldg. 235, gold room (uncleared area). Contact: Mukul Kumar, 2-0600, or Roberta Marino, 3-7865.

Tuesday  
**15**

#### **CHEMISTRY & MATERIALS SCIENCE**

"Nucleation-Controlled Reactions and Metastable Structures," by J.H. Perepezko,

University of Wisconsin-Madison. 3:30 p.m., Bldg. 235, Gold Room (uncleared area). Contacts: Michael Fluss, 3-6665, or Kristine Ramirez, 3-4681.

#### **PHYSICS & ADVANCED TECHNOLOGIES**

"Basic Science in the Non-Equilibrium Physics Project at Los Alamos National Laboratory," by Emil Mottola, LANL. 2 p.m. Bldg. 219, room 163 (badge required). Contact: Leslee Markham, [Markham2@llnl.gov](mailto:Markham2@llnl.gov).

Wednesday  
**16**

#### **CHEMISTRY & MATERIALS SCIENCE**

"Step Motion Patterns and Kinetic Instabilities on Crystal Surfaces," by John Weeks, University of Maryland. 2 p.m., Bldg. 235, room 1090 (uncleared area). Contacts: George Gilmer, 3-0697, or Linda Jones, 3-8839.

Thursday  
**17**

#### **H DIVISION**

"Review of Some Recent Shock Compression Studies of Liquid Deuterium" by Marvin Ross.

10:30 a.m., Bldg. 219, room

163 (badge required). Contacts: Lin Yang, 4-4153, Donna Vercelli, 2-0976.

Friday  
**18**

#### **INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS**

"Cosmic Dimples: Where Next for Galaxy Clusters?" by August Evrard, University of Michigan.

Noon, Bldg. 319, room 205 (badge required). Contact: Adam Stanford, 3-0613.

#### **DEFENSE & NUCLEAR TECHNOLOGIES**

"Blue Gene/L and Stockpile Stewardship," by David Nowak/Mark Seager/Lynn Kissel. 10:30 a.m., Bldg. 123 auditorium (badge required). Contacts: Linda Stuart, 3-7001, Mark Herrmann, 2-6999.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to [tmc-submit@llnl.gov](mailto:tmc-submit@llnl.gov). For information on subscribing to the electronic Technical Meeting Calendar list, contact the registrar at [registrar@llnl.gov](mailto:registrar@llnl.gov).

## NEWS OF NOTE



# UC approves Laboratory ISSM project plan

The Laboratory took a major step toward implementing its Integrated Safeguards & Security Management (ISSM) program in December when it submitted, and UC approved, its formal ISSM Project Plan. The plan was developed during the second half of 2001 as input from employees, management levels within directorates, and other sources was gathered and analyzed, and main areas to be addressed were identified.

ISSM is an initiative to enhance safeguards and security practices at the Lab, ensure these functions and activities are an integral and visible part of the Lab's work planning and execution processes, and are performed as effectively and efficiently as possible.

The ISSM Project Plan, which was formally submitted to the University of California on December 14, identifies six major tasks for implementation:

- Better definition of requirements - especially those that pertain to computer security and foreign visits and assignments.
- Define roles, responsibilities and authorities for all employees.
- Strengthen and provide additional tools to help each individual meet his/her roles, responsibilities



and authorities.

- Improve mechanisms for providing information to workers and managers.
- Improve mechanisms to obtain timely input from workers and managers.
- Enhance and validate feedback, improvement and accountability mechanisms for all employees.

Efforts to improve communications are already under way. Recently the Lab set up a special security hotline, 222, to provide a quick link for responses to questions and concerns. Also, a security-oriented Lessons Learned Program is being developed.

The activities called for under the ISSM project Plan need to be substantially underway by Dec. 31, 2002. ISSM is being put into place as part of the Appendix O Program Performance Initiatives under the management contracts between the University of California and Department of Energy for both LLNL and LANL.

Once implemented, the goal for ISSM is for all employees to "work securely," that is to be fully aware of, and understand the Laboratory's Security Program and meet its requirements effectively. The

Lab is committed to future continuous improvement of ISSM as part of the "work securely" objective, said Den Fisher, AD for Safety, Security and Environmental Protection. "This means improving security while minimizing the administrative burdens in achieving our mission goals."

The ISSM Project Plan was developed by representatives from each directorate, along with experts in safeguards & security. Input was also provided through various focus groups and a gap analysis.

"Everyone involved feels very positive about the project plan," said Roger Werne, from NAI and a member of the group that prepared the ISSM document. "The project plan effectively captured the main themes identified as concerns through the information gathering process."

"The objective now is to bring everyone to the appropriate level of security awareness based on their responsibilities," said Edwin Tippens of Safeguards and Security. Tippens also sits on the ISSM steering committee.

Tippens added, "We are not creating a management system that is process oriented. We are emphasizing the need for employees to understand what each of our security responsibilities are." Some training (mainly online) will be provided.

More on ISSM, along with employees roles, responsibilities and authorities will be published in *Newsline* and *NewsOnLine* in coming weeks.

## Deadline for selecting alternate username looms



### CIO UPDATE

TED MICHELS

In October, IA standard IA-1601 declared each person's official username as her/his official ID (e.g., michels3@llnl.gov), and created a new identity for each person, the alternate username. This standard can be read at <http://ia.llnl.gov/standards/ia1601/ia1601.html>.

The alternate username is intended to accom-

modate the limitations of legacy systems that are unable to accept usernames longer than eight characters. The use of the alternate username identity is being implemented across the laboratory in two phases.

Phase One: On Nov. 1, each person's alternate username was preset by LLNL to match either the official username or e-mail alias if it does not exceed eight characters; otherwise it was preset to blanks. Each person may select a new alternate username up until Feb. 1, at which time it will become permanent and can never be reused. This time limit will not apply to alternate usernames that were preset to blanks.

The URL for selecting an alternate username

is <https://www-oln.llnl.gov/autoreg/cgi-bin/autoreg.cgi>. Note: You will need an official ID and personal access code to select a new alternate username. Questions regarding the selection of an alternate username can be directed to the LC Hotline at 2-4531 (computing@llnl.gov).

Phase Two: After Feb. 1, non-blank alternate usernames can only be changed if a change in a person's legal name affects it. Alternate usernames will be available via PH as LLNL-only information. New hires will have their alternate usernames set to blanks until they select permanent ones. Selection of an alternate username will be a prerequisite for obtaining an account on any system that uses this identity.

## GUIDESTAR

*Continued from page 1*

light" on Dec. 23, was created using a 20-watt dye laser to illuminate a diffuse layer of sodium atoms that exists 60 miles (95 km) above the Earth's surface. When activated by the laser, the sodium atoms produced a very small source of light, less than a meter (39 inches) in diameter, which allowed the adaptive optics system to measure the distortions of the atmosphere. Two more commissionings are scheduled for later this month.

The resulting virtual star was measured at 9.5 magnitude, about 25 times fainter than anything that can be seen by the unaided eye, but bright enough to operate the adaptive optics system. The star appeared orange, the same color of common low-pressure sodium vapor streetlights. The virtual guide star system was developed in collaboration with the W.M. Keck Observatory, with additional support provided by the National Aeronautics and Space Administration (NASA) and the National Science Foundation's Center for Adaptive Optics (CfAO) at UC Santa Cruz.

Scientists and engineers from the Laser Science & Technology Division of the National Ignition Facility Directorate at LLNL played a key role in preparing the laser that creates the guide star. For two and a half years, Deanna Pennington, Curtis Brown, Pam Danforth and Holger Jones worked in Hawaii redesigning, demonstrating and commissioning the laser system on the telescope so that the virtual guide star could achieve "first light."

The team hopes to integrate the system with adaptive optics in June when they will be able to see a real star.

Adaptive optics refers to the ability to compensate or adapt to turbulence in the Earth's atmosphere, removing the blurring of starlight. Adaptive optics systems measure the distortions of the light from a star and then remove the distortions by bouncing the light off a deformable mirror that corrects the image several hundred times per second.

With Keck adaptive optics, for which LLNL scientists developed the fast real-time control system, astronomers are obtaining infrared images with four times better resolution than the Hubble Space Telescope, which orbits high above the Earth's atmosphere. Many significant discoveries have already been attributed to Keck adaptive optics, and the Keck virtual guide star is expected to lead to many more.

"We have seen lasers develop into powerful tools in fields ranging from medicine to compact disc players," said Claire Max of LLNL and UC Santa Cruz, principal investigator for the Keck laser project. "Our new virtual guide star marks the start of a new era, when we'll see lasers contributing to astronomy as well."

The Keck virtual guide star system consists of a dye laser that is used to produce light with the wavelength of the atomic sodium resonance line at 589 nm. The 20-watt output of the dye laser is projected out of a 20-inch (50 cm) lens attached to the side of the 10-meter Keck II telescope. It is based on a concept originally implemented by LLNL scientists at the UC

Lick Observatory at Mount Hamilton.

"We asked for an early present this year, and just before Christmas we were given a virtual star that will dramatically increase the research capabilities of the world's largest telescope," said Frederic Chaffee, director of the W.M. Keck Observatory. "This effort could not have been possible without the talent and dedication of our adaptive optics and laser guide star team. We couldn't be happier with these results, and we look forward to fully integrating the laser with our adaptive optics system by the middle of 2002."

The main components of the Keck adaptive optics system are a wavefront sensor camera, a fast control computer and a deformable mirror. The wavefront sensor camera measures distortions due to atmospheric turbulence using light from the guide star. A control computer computes the wavefront distortion up to 670 times a second and sends commands to the deformable mirror. The deformable mirror, about six inches (15 cm) in diameter, is made out of a thin sheet of reflective glass controlled by 349 actuators that can adjust the shape of the mirror by several microns, a distance large enough to correct for atmospheric distortions.

The Keck virtual guide star system is the world's most powerful laser currently in use at an astronomical telescope. The laser was developed by LLNL staff who also played a key role in the deployment of the laser at the telescope.

For images of the virtual guide star, see [http://www.llnl.gov/llnl/06news/NewsMedia/keck\\_images.html](http://www.llnl.gov/llnl/06news/NewsMedia/keck_images.html).





# CLASSIFIED ADS

## AUTOMOBILES

1986 - El Camino V8 Auto, Bucket Seats, Air Shocks, Tilt, Cruise, Bed Mat, Maroon, Center Cap Wheels, Good Tires, 80K Miles \$4800 OBO 925-449-3737

1998 - Jaguar XJ8 Vanden Plas Sedan, 42K, excellent condition, automatic, sunroof, leather, a/c, power everything, stereo/CD changer, pure luxury, \$35,000. 510-208-3266

1991 - Honda Civic-LX, 134000 miles, AT, light blue, good cond, \$3950/bo, call after 5 PM or leave msg. 209-832-5026

1989 - Ford Escort 4-Door Hatchback.104k miles. AutoTrans, PwrSteer,A/C. AM/FM/CD Stereo.Maintenance records.\$1200/obo 925-447-0083

1985 - Volvo 240 DL, blue, AT, Ac, FM Cass, runs great. Excellent car for commuter or student. 209-836-5671

1986 - Honda Civic, well maintained with records. New front struts & tires. Recent brakes, clutch, & cooling system maintenance. \$2,000 OBO. 925-828-7021

1960 - El Camino no motor/transmission \$1,500.00 OBO. 209-605-2773

1991 - Ford Probe, rebuilt transmission, four new tires, runs good, 122K miles, needs some body work, \$2000 408-945-0250

1995 - Mercury Tracer 4 Dr., 5 sp, 1.9L, AC, PS, PB, PW, PM, CC, 100K Miles, New Trans, brakes. Dark green, Great Condition. \$3500. 209-239-6402

1966 - Ford Mustang Coupe. Excellent condition. Rebuilt original engine. Many new parts. Fairly new paint and interior. 289 V-8 Automatic. \$6700 925-461-9136

1988 - BMW635csia, 2-dr coupe, silver/gray int, excellent cond, computer, power, sun roof, AT, a/c, cruise control, \$7000, 160,000, mi.,maint. recs. 925-838-7597

1999 - Nissan Quest GXE, Silver color, Fully loaded, Excellent cond., 18K miles, Must sell, asking 16,999 only 209-832-3297

1993 - Jeep Grand Cherokee Laredo, 116k miles, excellent condition, \$5800 OBO 925-447-3677

1997 - Plymouth Grand Voyager SE, 72K miles, just serviced, excellent shape, \$12,000. 925-846-3875

1989 - Toyota Celica ST, 180K, good maint./records, good commute car. \$1600/BO 510-208-5207

1994 - Nissan Quest GXE, Diamond blue, 2nd row captains chairs, tow pkg w/hitch, great condition, 134K miles, \$7300. 925-735-0881

2000 - Honda Accord EX Coupe; 4cyl, Automatic, silver w/spoiler, moon roof, tinted windows, CD/Cass, low miles, excl. cond., MUST SELL \$17,500. 209-833-7056

1994 - Toyota Corolla DX 4dr Sedan, 1.8L, AT, AC, PS, PB, PL, Cruise, Tilt steering, Keyless entry/Alarm, Light Beige, 101K, excellent condition, \$5300 925-447-7287

1992 - VW GTI. Green, 5-speed, with a.c., radio/cassette, sunroof. 168K . Asking \$2800/BO. 925-846-8703

1994 - Ford Probe, 105K miles, upgraded stereo, 10 disc CD changer, very clean, runs great, Blue Book = \$5,500, asking \$4,200 925-455-6643

1985 - Chevy Suburban, diesel w/190,000 mi.New tires & wheels, started restoration, must see. \$1500.00. 925-447-5132

2000 - Honda Civic, 4-Cyl. 1.6L VTEC, 5 Speed Manual,Front Wheel Drive, 18k miles, \$14.5k,925-485-3680

**AUTOMOBILE ACCESSORIES**

15 inch Six bolt Pickup TRUCK WHEELS, steel, 2 for \$30 Livermore 925-447-7070

1988-93 Mustang GT alloy 15x7 wheels, 5 each with 205/65R15 tires, \$100 OBO 925-455-8238

2-bbl carburetor for 65 Buick/GM car. \$25 925-447-6866

4 Wheels for BMW 3 Series, 1992 on from 1993 325is factory sport package basketweave style, cast aluminum 7X15 ET46, 5 lug 100mm pattern \$125 510-653-1017

**BOATS**

Anchor - Danforth type for boat up to 27 feet. New \$5.00 925-447-6728

Kawasaki 440 stand up Jet Ski, \$800.00 or best offer, excellent condition, only used 3 summers. Has been in storage. 209-537-4614

Sail, mast and boom for sail board. Like new. \$300 OBO 925-455-4208

1974 17ft. Caravelle,excellent condition, low hours. 302 Ford engine & 888 Merc. outdrive. \$2400.00 Fish or ski 209-836-0631

## CAMERAS

Canon AE-1 complete with macro/28-210 zoom lens, wide angle and 50 mm lens, auto winder, excellent condition. \$150.00 925-516-9510

Pentax IQZoom 900. \$100.00 OBO. Needs minor service. 209-824-0227

Fuji Endeavor APS Camera, #310ix Zoom 24-70mm.\$75. 510-226-7440

**ELECTRONIC EQUIPMENT**

Electronic crossover for stereo system. Heathkit rack mount style, adjustable frequency. \$20 925-447-5194

DI style turn table Techniches 1200IMK, with dia stylis, needs new on-off dial \$200, \$800 new. 925-373-7434

Macintosh Quadra, 25MHz, 24MB RAM, 160 MB drive, color monitor, Laserwriter printer, modem, ZIP & CD drives, System 7.5, Excel & Word. \$100 obo. 209-832-7582

Hitachi 9-in. color TV AC/DC operation VG condition \$25.00 925-447-6728

Macintosh 2SI with extra external hard drive, monitor, external CD ROM, StyleWriter 1200 printer, all accessories and manuals. \$95 OBO 925-371-0558

Sony DVD player dvps330. Plays dvd and audio cd. all cables included. \$75.00 925-443-2856

Nokia phones 5190, have three to sell, 15.00 each 925-634-0423

Pioneer dual cassette tape deck, \$40 925-484-9028

Stereo equip. Hitachi receiver SR-903, 75 watts. \$25. Pioneer cassette tape deck CT-F9191(one channel needs work) \$15. high quality. with manuals. 925-443-6766

## GIVEAWAY

36 inch RCA television, 2 years old, needs repair, free to good home. 925-449-0259

Window air conditioner. 5000 BTU. 115 V. Width 25.5 inches. 925-484-1319

PARENTS troubled by TEEN behavior? What to do now, before too late? Free info on ToughLove, & Residential Treatment Facilities. 925-447-7070

Moving Boxes, all sizes. 925-938-3727

Leather couch. Dark blue. Almost new. Needs some cleaning up. 925-447-8557

FREE Macintosh SE30, external 20 MB hard drive, external floppy drive. SE30 needs new internal battery. 510-733-9802

Brown plaid double sofa bed. Excellent condition. Free to good home. You haul. 925-443-0526

File cabinet, 4 drawers, very sturdy, needs a paint job. You haul. 925-371-0783

110 gallon aquarium with hood & stand (has a small leak that can be repaired) or can be used as is for reptiles, small criters or whatever 925-454-1969

Free clothes dryer. Works o.k. 925-606-6422

## HOUSEHOLD

Solid Oak Dresser, Excellent condition, Like New. Measures 59"tall, 48" wide. 18" deep. Medium Oak color. \$600.00 O.B.O.

925-443-1571 HomeWhirlpool stack washer/dryer. Works great. valued price at \$300.00. New they are \$950.00 up. 510-537-7222

Two 6-foot high, 30-inch wide, 16-inch deep pine wall units with lower cabinet doors, dark finish. Family room quality! \$50 each. 925-371-6882

Couch and Loveseat (matching). Tan (golden) color. In excellent shape. \$100 for both. 209-832-7204

Upholstered bench, green, Queen Anne legs. \$120. 925-606-1216

Agapanphus and Society Garlic. \$2.50 ea. 925-447-6192

Washer & Dryer. Whirlpool. 7 years old. \$200 OBO 925-447-8557

1.4 cu ft Microwave oven (Kenmore)- Solid State Digital 100-min timer (90-625 watts). Microwave stand included. Excellent condition. \$300.00 925-447-5144

Two metal toddler bed frames, color white, excellent condition, \$20 each obo. One crib mattress excellent condition \$30 obo 925-371-4479

Oak Entertainment Center - excellent cond, solid wood, glassed in stereo, several drawers and doors for storage, some lockable, 55wx58tx21d. \$500 925-371-0783

Kenmore, heavy duty washer & dryer. Mint condition,must sell!! \$250. 925-243-1373

Water softener system for your home. Save on soap, clothes and fixtures. Cleaner drinking water. \$300.00 925-373-2528

Large office-type wooden desk; beautiful wood. \$95.00 or best offer. 925-447-7524

Hunter green sofa; pillow-top ultra soft fabric. Very comfortable and attractive. Only 2 yrs. old/Scotch Guard protection. Like new! \$400 OBO 925-455-4208

Elliott white iron brass bed w/Simmons Queen size mattress, used only for guest room. \$500.00 or OBO. 925-449-4887

Brass daybed with trundle and mattresses. Excellent condition. \$75.00. 925-454-1881

Coffee table, oak with glass panes, excellent condition, \$50. 925-454-0877

Changing table w/ contour pad and cover. Very sturdy. Light wood w/ natural finish, white shelves, \$50. Graco doorway jumper, \$15. 925-454-0877

KENMORE WASHER/ GAS DRYER-White. Extra Set, excellent shape, no problems. Will sacrifice both for \$250.00. or \$150.00 Each. 925-784-7196

Little Tikes/E Sleepytime Express Toddler Bed regularly \$169.99 @ JC Penney. bed only for \$100 or BO. Like new! 209-599-7914

Office desk, grey steel, 30 x 60 x 29 inches high, one file drawer, very solid, \$60. 925-454-9291

Stackable washer/dryer. Good for Apartment living. Excellent condition. 350.00 Modesto 578-5257 209-578-5257

Chipper Shredder Heavy duty (3600rpm, 235lbs.) Roto-Hoe 500cpw/5B 5hp Briggs/Stratton gas engine 24 Hammer-Mill tines, 900rpw \$150 510-653-1017

**LOST & FOUND**

Lost: Man's bicycle. Old, yellow Schwinn 10 speed with rear carrier. Faded cream colored plastic handlebar wrappings. 925-830-1868

Found near T-3577, one 1/3 carat diamond ear ring on hoop with clasp 925-443-7828

## MISCELLANEOUS

Engine Stand \$40 925-606-0480

Graco Portacrib \$20. Little Tykes Rocking Boat \$7. 209-833-9141

Professional Cabochon Lapidary shaping and polishing machine with 6 inch diamond wheels and polishing pads. Like new, cost \$716 sell for \$450. 925-447-6670

Golden Europe Daisy 1 gal, 7 avail, \$15 take all. 925-447-6192

15x7 MAG WHEELS, four bolt, Ford 1988 Mustang, fit others only \$75 for all 4 925-447-7070

Old wood bow and 10 wood shaft arrows. Bow made by Indian Archery. \$60.00 925-447-6099

Garage SALE! 1438 Lennox Lane, Livermore. Baseball & Football Cards, household & antiques. Sat 9-3:00pm 1-19-02

Large office desk: beautiful teak wood. \$200 925-447-7524

Foley Belsaw 508 Sharpsall.Two Manuals,& many extra wheels.New Over \$700.00. Sell for \$200.00,Includes stand.Exc.Condition 209-836-0631

RAIDER PLAYOFF TICKETS: Sec.-205 Seats 12,13,14 Great View, Family Section \$450 (925) 625-8272 925-625-8272

Metal drafting table. Tilts and elevates. \$75.00 OBO. 925-456-3010

Treadmill, purchased for \$800. in Jan. 1999, not used, must sell now, \$150. 925-249-1786

3 Bookcases - oak, 48in w x 60in h, \$125; med oak, 48in w x 35in h, \$100; pine, 36in w x 36in h, \$40. All solid wood, excellent condition. 925-371-0783

Thomas The Train table and Brio train tracks all for \$100.00. 925-449-4887

45s collection. About 100 mostly from the 1980s. Original sleeves, excellent condition. Wish to sell as a lot. List of titles available. 209-521-1555

Infant Car Seat - Evenflo On My Way Position Right V. Incl. two car bases and covers. Barely used. Still under warranty! \$50 for all. 925-606-9781

Snowboarding Gear, BodyGlove, jackets and pants, boys and girls, sizes 14 and 16, youth large, also a Snowboard-Morrow 58 inches, no bindings 925-634-0423

## MOTORCYCLES

1986 - Yamaha PW 50, good condition, runs great, \$650 firm 209-833-3785

1988 - Honda Shadow 1100.New parts, run exc. never been in rain.A must see!3900 or make me an offer. 510-429-1530

1980 - Honda CB750 Super Sport \$850 209-836-5784

1998 - Kawasaki Vulcan 800 Classic Green Fenders w/White Trim Low Mileage 1700. New Battery Cover and travel bag included Asking \$4000 925-447-4763

Exhaust pipes (Cobra Boulevard brand) for 1996 Honda Shadow 600. Like new condition, all hardware. Make offer. 925-829-2581

1989 - Yamaha FZR600 street bike. Black/Red, Fox shock, Yoshimura pipe. Sharp and runs great.

Price - \$2000 925-449-7155

## MUSIC INSTRUMENTS

Parlor Grand Piano, country French style, pecan \$10,000 call Dot after 6pm. 209-892-3241

Snare drum with stand. Mapex brand, maple snare,5.5x14,transparent midnight black, with clutch stand. New in box. \$225 firm 925-243-1373

Crate, practice amp. With distortion and, clean channels. \$80.00.Pg. 02734 209-824-0227

PIANO, upright, dark wood finish, good shape. Moving, must sell ASAP! \$400.00 925-516-9529

Please call if you can donate a portable piano keyboard for an underprivileged children music project. 925-447-2076

Guitar Amplifier,Samick model LA-15R new never used. 75.00 956-447-3399

Snare drum. Pearl brand,5.5x13,sensitone brass, custom black powder coated, new. \$245. 925-243-1373

## PETS & SUPPLIES

Rabbit, mini-rex buck, pedigree, chestnut, 9 months old. Free. Antioch. 925-706-2088

Blue Front Amazon-hand tame & talks. Cage plus toys and supplies. \$400.00. 925-294-8632

Parakeet, small, teal male, 1 1/2 years old, with cage, #25.00. 925-706-2088

Horse Boarding - 2 ac. pvt. Pleasanton orchard pasture, shelters, cyclone fences, \$150 per month includes grass hay and alfalfa twice a day. 925-443-6531

29gal established African tank: real driftwood; live plants; killifish. With matching stand. Gorgeous! To good home. \$125 OBO. 925-454-9116

Cat free to good home. 925-516-9293

FREE 110 gallon aquarium with stand / small leak that can be repaired / good for reptiles or whatever 925-454-1969

PAINT filly,A.P.H.A.beautiful&smart,prof trained,cutting,very athletic,calm must sell \$4000.00O. O.B.O 925-371-5371

## RECREATION EQUIPMENT

Stair Stepper w/electronic counters \$35.00 925-449-1481

Old, all wood pair of snow skis, with bindings. \$65.00 925-447-1009

Nearly new CardioGlide, like Healthrider, adjustable, low/high Intensity, low Impact, wide handlebar, electronic display. Only \$75! 925-648-8008

Complete scuba outfit. Used twice Regs Bcd,suit,fins,mask,boots,gloves,wts \$ AB gear,mat. \$800.00 or BO. All or None 209-836-0631

Snowboard Santa Cruz 163 \$200, Burton,SI(step-in) boots size 10 \$100,SI bindings \$100.00,all like new Burton boots size 10.5 \$50 used 510-783-9923

Scuba equipment and gear. Many micellaneous items. 209-239-8767

## RIDESHARING

Express your commute, call 2-RIDE for more information or visit http://www-r.llnl.gov/bsmp.

TRACY - Carpool looking for passengers. Hrs 8-4:45. 209-833-1201, ext. 2-9955

Modesto - Luxury van. 14 psgr. 8 - 4:30 schedule. \$110/mo, plus other \$\$ off for transit pretax and if you want to share driving. 209-521-9047, ext. 2-5177

Sacramento - Moving to Sacramento area in February. Looking to join vanpool/carpool. Call if you have a spot. THANKS! 209-823-8309, ext. 2-3399

Modesto - 8-4:30 luxury van leaves from Vintage Fair Mall with drop off and pickup near office on site. 209-545-3866, ext. 3-8056

## SERVICES

Hauling Service. Estate Cleanouts, Attics, Garage, Shed and Barns. Misc.925-373-9540

CoDA n Codependents Anonymous - Meets Tuesday Noon B571/R2016. 12 Steps Support BETTER RELATIONSHIPS! Just come or Info 925-447-7070

FLOORING: Carpet, linoleum, wood laminate. Reasonable rates, reliable. Licensed/bonded/insured. 925-516-9510

Headshot Photography - B&W Portraiture for Actors, Entertainers, Dancers & Musicians. 925-449-0107

Handyman service, repair or replace almost anything in and around your house. 209-847-6623

House Painting - Interior & Exterior, over 16 yrs experience. Free estimates. 925-447-5132

## SHARED HOUSING

Livermore - 4 bdrm house, looking for 1 roommate who will have 2 bedrooms and a private bath, all

privileges. \$500/mo 925-449-5454

Livermore - Unfurn. Rm for rent. Neat/Clean home. \$550 includes util. \$300 deposit. NS,ND,NP. Kitchen/Laundry privileges. 10 min.from Lab. 925-447-8698

Livermore - Room in 3bd/2ba home really nice approx. 3 minutes from the Lab full privileges. NS/NP. \$650.00 + Dep + 1/3 utilities. leave message on cel phone. 510-305-9791

Livermore - Share 2 bedroom townhouse 3 mi. from Lab. Unfurn. rm/with semi-private bath. NS/NP. Util. includ. \$600 mo. plus last mo. rent 925-443-1482

Livermore - Furnished room w/own bath in clean secure 4BD/2BA home 4 mi to Lab.Full privileges. NS N/P \$600 incl util 925-449-8034

Livermore - Rooms for rent. Completely remodeled and very elegant. Wonderful area/south side/quiet. 800+/mo. Share utilities. cell 925-382-6774; 925-292-5041

Livermore - Room in newer 3bd/2ba home,Full Privileges, \$500m + 1/3 utilities.Great Location, Quiet, Clean, and Comfortable. Pref-Female, N/S,N/P. 925-371-2712

Livermore - Renting Room, 500.00 + Utilities, Eastside, 2.5 Miles from Lab. 925-447-7862

Livermore - Unfurn rm w/ semi-private bath. Kitchen and Laundry priv. Cable and separte phone hook-up. Utilities inc. \$600 mo. 925-449-1474

Livermore - Room for rent. good east side neighborhood. \$460/mo. small room, furnished. utilities included. smoker okay. 925-447-6218

Livermore - - Room available in 3BR/2BA home in quite neighborhood, private bath, full privileges, N/S N/P. \$500 + Dep + partial utilities. 925-455-5362

Dublin - Share rental in a 3 bedroom apt. 1 room, private bath, full washer and dryer in apt. nice quiet complex. 700.00 plus 1/2 utilities. 925-803-1028

## TRUCKS & TRAILERS

1991 - Ford Explorer XLT 4x4.129K mi.Silver/Black,A/T,A/C,PwrSteer,PwrWin,MoonRo of,AM/FM/Cassette,SecuritySystem.\$5200/obo, 925-447-0083

1995 - Jeep Cherokee Sport,4-door,V-6,good tires,good brakes,AM\FM CD, hunter green,2WD auto,air,100k miles, good condition, \$5,500. 925-736-7507

1976 - Dodge Minnie Win RV excellent condition asking \$5000 call for more information 209-962-5468

1989 - Mazda B-2200. Red, looks darling, runs great. Bed liner, tool box, new tires. \$2300 obo. 209-823-8309

1963 - Ford truck F-100, runs good, needs body work, reconditioning started. \$800 209-239-6402

1995 - 34ft Dutch Star w/slide Motorhome by Newmar. Loaded, like new, 20,000 miles, extended warranty, asking \$51,000. 925-634-4959

1970 - F100 Pickup. 95K actual miles. Mechanical excellent. Needs bodywork. Grey. New cooling, brakes, steering. Bought at LLNL auction in 1994 offer 925-519-5957

1990 - Ford Pick-up, F-250 Extended Cab, 2WD, 7.3 Diesel Eng, Recent Tires & Shocks, Extras, Good Condition. \$6250.00 OBO 209-946-0645

Cabover Camper for shortbed truck. older but in good condition. \$150 obo. 925-634-0778

## VACATION RENTALS

Hawaii - Kailua-Kona, Big Island on Alii Dr., new 2BR/2BH condos, ocean view, pools,snorkeling, whale watching, LLNL rates. 925-833-6061 925-233-6061

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, newly remodeled, nicely furnished,all amenities,close to all skiing, Reserve Now! 209-599-4644

HAENA, KAUAI - - Private house and/or studio on the scenic north coast near Hanalei Bay - this is the real Hawaii! House-\$125/day, studio-\$75/day. 831-479-3441

## WANTED

Wanted Math Tutor for daughter in 12th grade. Pay by hour. Help with homework and test. Woman preferred. Tutor in my Livermore home or yours. 925-449-6767

Baby crib, changing table, porta-crib and other baby equipment in good condition wanted. 925-625-5938

Bow Flex Home Gym 925-606-8298

Bunk Beds. Any Condition. 925-447-8557

Portable phonograph to play my old records 925-447-7768

Rotex Punch Dies, all sizes, any condition. 209-848-1375

Lawn mower, white night stands, silk ficus tree, car stereo. 925-706-2088

Looking to purchase a home/duet home in Livermore, are you selling? 925-785-3589

Trumpet or Trombone for beginning band member. 209-858-1521



## NEWS OF NOTE



# Annual report shows environmental compliance

The 2001 Site Annual Environmental Report, for LLNL environmental impacts for the year 2000, concludes that radiological doses to the public caused by LLNL operations are less than 1 percent of regulatory standards. This is about 2,500 times smaller than the doses received from natural background radiation by U.S. citizens, on average.

The document is part of a DOE requirement that each of its facilities publish an annual report that summarizes regulatory compliance status as well as the results of environmental monitoring.

The analytical results and evaluations of the SAER generally show continuing low contaminant levels. This reflects both decreases in historic operations at the Laboratory and its increasing control of pollutants.

Environmental compliance activities in 2000 had significant achievements:

- Livermore site ground water remediation activities treated more than 1 billion liters of ground water; reducing the concentration and length of contaminant plumes migrating westward off site.
- Site 300 environmental remediation activities continue to stop the contaminant plumes from migrating eastward off site; there is no longer an off-site plume of contaminants.
- Sanitary sewer discharges were more than 99 percent compliant with the Livermore Water Reclamation Plant standards. No sewer releases exceeded discharge limits for radioactive materials.

## Specific monitoring activities

Air is monitored at various locations on the Livermore site, throughout the Livermore Valley, and in the Tracy area. Concentrations of all monitored radionuclides and beryllium at all locations were well below levels that would endanger the environment or public health.

For example, the highest median concentration of plutonium for all sampling locations was 0.025 percent of the federal standard. Similar results were found at air sampling locations in areas around Site 300. Federal radioactivity exposure standards are highly protective of the public and limit the annual dose an individual can receive. LLNL has never come close to exceeding the federal standards for the public.

Throughout 2000, LLNL operated 76 samplers at six facilities to measure any radioactivity in effluent air generated from Lab operations. Radionuclide emissions from all monitored facilities remain very low.

Emissions of non-radioactive hazardous and toxic air pollutants in Laboratory operations in 2000 were low. Approximately 93 kilograms a day of criteria air pollutants (including nitrogen oxides, volatile organics, sulfur oxides, particulate matter, carbon monoxide, and lead) are emitted per day from the Livermore site and about 3.6 kilograms are emitted from Site 300. These



The Western Burrowing Owl graces the cover of the Lab's latest "Environmental Report 2000."

releases from the LLNL sites are less than one tenth of one percent of the total daily emissions in the entire Bay Area.

The Livermore site discharges almost 1 million liters of wastewater daily to the City of Livermore sewer system (approximately 3.9% of the total flow to the system). The sewage flow from LLNL to the Livermore Water Reclamation Plant (LWRP) is monitored continuously. If any significant releases of radioactivity, metals, or high or low pH water are detected, the wastewater is redirected to a LLNL sewer diversion system before it leaves the LLNL site. It is then treated and disposed of appropriately. In 2000, LLNL achieved more than 99% compliance with LWRP permit limits.

In 2000 the maximum tritium activity measured in on and off-site drinking water was less than 0.05 percent of the regulatory maximum contaminant level (MCL). Gross alpha and gross beta radioactivity measurements were also well below regulatory levels of concern.

Most of the analyses of 2000 on-site soil samples did not detect any nonradiological contaminants labeled as "constituents of concern." A few analyses detected either trace amounts of contaminants, or naturally occurring background concentrations. Radiological results were unchanged from previous years. Elevated concentrations of depleted uranium were found near two Site 300 firing tables.

All soil samples taken in the City of Livermore's Big Trees Park in 1998 yielded results well below levels of regulatory concern. A January 2000 report by the Agency for Toxic Substances and Disease Registry (ATSDR) confirmed these results. The ATSDR report finds that the most credible source of the plutonium in the park is from

sewage sludge applied to ornamental trees several decades ago.

## Groundwater remediation

In 2000, treatment facilities at the LLNL Livermore site processed over 1 billion liters of ground water. Nearly 270 kilograms of volatile organic compounds (VOCs) were removed during treatment.

More than 27 kilograms of VOCs were removed from soil and ground water in five treatment areas at Site 300. These efforts reduced the length of the previously off-site trichloroethylene plume to where it is now inside the site boundary. There is no longer an off-site plume of contamination.

## Waste minimization and pollution prevention

Waste generation at LLNL continues to drop dramatically. There were reductions in three categories: radioactive, hazardous and sanitary. Mixed waste (radioactive and hazardous waste combined) did not diminish. Total LLNL waste diverted from landfills in 2000 was 26,000 tons. That means the Lab recycled 85 percent of its non-hazardous waste.

## Radiological dose assessment

Every year a theoretical dose to the public is calculated based upon what an individual would receive if he/she lived for a year where the highest radiation dose would occur. For the Livermore site that dose is 0.38 millirem. For Site 300, it is 0.019 millirem. These values are well within those estimated over the past decade and are very small compared with an average radioactive dose of 360 millirem received from all sources, mostly natural background sources.

## Endangered species

The Laboratory meets the requirements of the U.S. Endangered Species Act and the California Endangered Species Act. In 2000, biological assessments were conducted for 82 Laboratory projects with the potential to disturb special status species. At Site 300 there were no active San Joaquin kit fox dens but three occupied American badger dens were found. Also, 11 active burrowing owl dens were discovered. The owls were marked for long-term studies. A population of California tiger salamanders continued to be monitored. Several rare plant populations were also monitored at Site 300: the large-flowered fiddleneck, the big tarplant, the diamond-petaled poppy and gypsum-loving larkspur. In 2000 the Amsinckia grandiflora Reserve was declared a critical habitat area by the secretary of the Department of Energy. LLNL has established an experimental population within the Reserve. It is working with the U. S. Fish and Wildlife Service on the continued monitoring of the native and experimental populations.

For a complete copy of the SAER, see the Web at <http://www-envirinfo.llnl.gov/> For information on the report, contact Bert Heffner, 4-4026.

SELECTION

Continued from page 1

president to consider soon after that.” While the recommendation of a Laboratory director is made by UC President Richard C. Atkinson and then approved by all the Regents, McTague noted that NNSA and DOE will play important roles. “I expect close interaction, particularly with NNSA Administrator John Gordon to get their input and buy in,” he said. The NNSA/DOE must concur with the Regents’ decision before it is final.

McTague noted that employees and the public will play a crucial role in the process early on. “I would encourage all Lab employees to communicate their thoughts to any of the individuals on the screening committee,” he said. “The screening committee is not only interested in names of individuals who should be considered, but in the type of person and the criteria for how we should select a new director.”

In addition, a daylong community meeting will be held at the Lab in either late February or early March. Members of the regents advisory committee will meet with selected community leaders to hear their views on the selection process. They will also be available to employees and any other individuals who may want to provide input.

Finally, a special UC address has been established for employees and others to offer input. The address is: University of California, Office of the President, Attn: LLNL Search, 1111 Franklin St., Room 12408, Oakland, 94607-5200.

“This is an important selection for Livermore and one that I hope all employees will think about,” said McTague. “We absolutely want feedback and it is this input that help us ensure a successful search.”

Director’s selection committee advisory groups

Here is the membership roster for the screening committee to advise the joint committee on the selection of a director for the Laboratory.

- John Birely, chair, independent consultant
- France Cordova, vice chancellor for research, Office of Research, UCOP
- Raymond Jeanloz, professor of Geology/Geophysics, UC Berkeley
- Walter Kohn, research professor, Department of Physics, UC Santa Barbara
- Darrell Long, professor, Computer Science Dept., Jack Baskin School of Engineering, UC Santa Cruz
- Tom Page, chairman and CEO, retired, San Diego Gas & Electric
- Robbie Vogt, professor of physics, California Institute of Technology

Lawrence Livermore National Laboratory

- Steve Ashby, acting deputy AD, Computing Applications and Research
- Trish Baisden, deputy AD for S&T, Chemistry and Materials Science
- Tomas Diaz de la Rubia, Materials Program leader, Chemistry and Materials Science
- Charlie McMillan, B Division Program leader, Defense & Nuclear Technologies
- John Nuckolls, director emeritus
- Mordy Rosen, chief scientist, X Division, Defense & Nuclear Technologies

Members of the joint committee to advise the president on the selection of a director for the Laboratory:

Regents:

- S. Sue Johnson, civic leader and chair of the Board of Regents
- John Davies, an attorney and past chair
- David Lee, business executive
- Velma Montoya, former commissioner of the U.S. Occupational Safety and Health Review Commission
- John Moores, vice chair of the board and chair of the Committee on Oversight of the DOE Laboratories
- Peter Preuss, business executive

Research scientists and administrators:

- Sidney Drell, former chair of the Oversight Committee and an arms control and defense policy expert
- Robert Dynes, chancellor at UC San Diego and vice chair of the UC President’s Council on the National Laboratories
- Harold Graboske, Lawrence Livermore’s AD for Chemistry and Materials Science
- Cynthia Nitta, group leader in Livermore’s Defense and Nuclear Technologies program
- Chand Viswanathan, chair of the University’s Academic Council

Touring the Lab



MICHAEL ANTHONY/TID

Adm. James Ellis, commander-in-chief for the U.S. Strategic Command, and Brig. Gen. Ronald Haeckel, acting deputy administrator for Defense Programs for NNSA, visited the Lab this week for a tour of ASCI, NIF and CAPS. In addition, the tour showed off the Lab’s NARAC capabilities and the Underground Analysis and Planning System. The day closed with DoD advanced defense technologies and dinner at the West Cafe. Shown from left, Wayne Shotts, Brig. Gen. Ronald Haeckel, Adm. James Ellis, Jeff Wadsworth, Bruce Goodwin, Michael Anastasio, George Miller and Bruce Tarter.

Did you know?

Dial 123 to check your voicemail on-site.

Dial 16 to access the paging system on-site.



Newsline  
UC-LLNL  
PO Box 808, L-797  
Livermore, CA 94551-0808